



State of Washington
REPORT OF EXAMINATION
FOR WATER RIGHT APPLICATION

PRIORITY DATE
November 19, 2015

WATER RIGHT NUMBER
G3-30748

MAILING ADDRESS
Daniel Nims
2450 Wallula Avenue
Walla Walla, WA 99362

Quantity Authorized for Withdrawal

WITHDRAWAL RATE	UNITS	ANNUAL QUANTITY (AF/YR)
6	GPM	0

Purpose

PURPOSE	WITHDRAWAL RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Non-consumptive heat exchange	6		GPM	0		01/01 - 12/31

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Walla Walla	Groundwater		32-Walla Walla

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
A well	350727320025	AAZ354	7N	35E	27	NW¼SW¼	46.05439	118.4264

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)
350727320025

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

Lot A of Short Plat filed in Book 4 of short plats of Page 286, under Auditors file No. 2008-1941, records of the Auditor of Walla Walla County, State of Washington.

Proposed Work

Non-consumptive heat exchange from a well, with water returned by infiltration system

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Started	1/1/2017	1/1/2018

Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Annually (Jan 31)
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm)

Provisions

Wells, Well Logs and Well Construction Standards

All wells constructed in the state shall meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned.

All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

Measurements, Monitoring, Metering and Reporting

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173.

Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Eastern Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Eastern Regional Office for forms to submit your water use data.

WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Underground Injection Control Program

The subject infiltration system shall be registered with Ecology's Underground Injection Control Program prior to discharge of any water withdrawn under this authorization. Please contact Ecology Water Quality Program for details, 509-329-3400.

The water shall be returned in the same quantity and quality (excluding temperature change), at a point in close proximity to the withdrawal well, to the same body of public ground water.

Water Use Efficiency

The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

Proof of Appropriation

The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the permit. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Findings of Facts

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. G3-30748, subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.
- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW Ste 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Signed at Spokane, Washington, this day of 2016.

Keith Stoffel, Section Manager

For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>. To find laws and agency rules visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>.

INVESTIGATOR'S REPORT

Application for Water Right – Daniel Nims

Water Right Control Number G3-30748

Dan Tolleson, Department of Ecology

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number G3-30748.

Table 1 Summary of Requested Water Right

Applicant Name:	Daniel Nims
Date of Application:	11/19/2015
Place of Use:	Lot A of Short Plat filed in Book 4 of short plats of Page 286, under Auditors file No. 2008-1941, records of the Auditor of Walla Walla County, State of Washington.

County	Waterbody	Tributary To	WRIA
Walla Walla	Groundwater		32-Walla Walla

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Heat exchange	6	GPM	2.5	01/01	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
A well	350727320025	AAZ354	7N	35E	27	NW¼SW¼	46.05439	118.4264

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian; Datum: NAD83/WGS84.

Priority Processing

This application is being priority processed since it qualified under the criteria of WAC 173-152, which allows for processing prior to competing applications.

According to WAC 173-152-050(2)(c), an application for a new water right will qualify for priority processing provided it is non-consumptive and substantially enhances or protects the environment. This WAC is specifically cited in Policy POL-2020 "Priority Processing of Heat Pump Applications".

- **Nonconsumptive Use:** WAC 173-532, Walla Walla River Basin, defines non-consumptive ground water use as there being no diminishment of the source or quality of the source. In order to meet this criteria, the withdrawn water must be injected or infiltrated immediately back to the aquifer. The water must be returned in the same quantity and quality (excluding temperature change), at a point in close proximity to the withdrawal well.
- **Substantially Enhance or Protect the Natural Environment:** An open-loop water source exchange system such as that proposed generally provides a considerable improvement in energy efficiency over comparable traditional systems. There is an energy savings over air-source heat pumps, particularly during periods of below-freezing weather, and there is no direct combustion associated with these systems as there would be with coal, oil or natural gas. The energy savings and reduction of greenhouse gases that this type of system provides over conventional heating and cooling systems can be considered as substantially enhancing the natural environment.

The proposed open-loop heat exchange system meets the criteria set forth in WAC 173-152-050(2)(c) and is granted priority processing. Priority processing was approved by Keith Stoffel, Water Resources Section Manager, Eastern Regional Office, on December 2, 2015.

Legal Requirements for Approval of Appropriation of Water

When an application for appropriation of public waters of the state is made, it is the responsibility of the Department of Ecology, Water Resources Program to determine whether or not the application meets the four tests listed in RCW 90.03.290(3):

1. is water available for appropriation,
2. is the proposed use a beneficial use, and
3. will the appropriation as proposed in the application not impair existing rights,
4. nor be detrimental to the public welfare

WAC 173-532-045 Future Permitting actions only allows the withdrawal of water in the Walla Walla basin when one of the following conditions apply:

- 1) The proposed water use is nonconsumptive.
- 2) The proposed ground water use is from the basalt aquifer and will not:
 - (a) Impair existing water rights;
 - (b) Affect any closed surface source where instream flows have not been established; and
 - (c) Affect any closed gravel aquifer.
- 3) The proposed surface water use would occur only during non-closure periods and is intended for an environmental enhancement project, as defined in WAC 173-532-020(6) and meeting the criteria listed in WAC 173-532-055.

Public Notice

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in The Waitsburg Times on December 24 and 31, 2015. No protests were received regarding this notice.

State Environmental Policy Act (SEPA)

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

- (a) It is a surface water right application for more than 1 cubic foot per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies;
- (b) It is a groundwater right application for more than 2,250 gallons per minute;
- (c) It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;

- (d) It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- (e) It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

INVESTIGATION

In considering the proposed application, the investigation included, but was not limited to, research and review of: (1) appropriate rules and statutes; (2) other water rights, permits and claims; (3) USGS topographic maps, and aerial photographs; (4) proposed point of withdrawal, delivery system and infiltration system; (5) proposed place of use; (6) Chapter 173-532 WAC Water Resources Program for the Walla Walla River Basin, WRIA 32 and Watershed Planning; and (7) discussions with Department of Ecology regional program staff.

A field investigation was conducted, by Dan Tolleson on May 25, 2016. The project is located approximately 1 mile west of College Place, Washington. The water right is located in the Walla Walla Basin, which is managed under Chapter 173-532 WAC Water Resources Program for the Walla Walla River Basin, WRIA 32.

The proposed place of use describes approximately 5 acres of land, which is developed with a house, irrigated yard and pasture. Mill Creek is located on the northern boundary of the proposed place of use, with significant riparian vegetation. The existing home has been developed to utilize the heat exchange system requested under this application. This system has been completed with the exception of a flow meter.

The proposed point of withdrawal, is a well located within the NW¼SW¼ of Section 27, T. 7 N., R. 35 E.W.M. This well is also the authorized source for an irrigation right (see below) and provides water under the exemption for single domestic supply (RCW 90.44.50). The well system currently consist of a submersible pump that has a flow meter for the irrigation system. Total instantaneous production from the well has been estimated to be 25 gallons per minute. This well can produce significantly more water than is proposed under this application, which is a result of it being used for multiple purposes. Because this well supplies multiple uses, water withdrawals will need to be coordinated so as not to exceed the quantities authorized. Water use beyond what is authorized may result in fines.

The return infiltration system for the heat exchange process is 100 feet of 4 inch perforated drain pipe, in a trench approximately 3-4 feet below ground surface. The pipe is wrapped in Geotextile fabric and was backfilled with 6 inches of gravel and then topsoil.

Proposed Use and Basis of Water Demand

The heat exchange process calls for pumping water out of the proposed well, passing it through a temperature exchange unit for the purpose of forced air ventilation. The water is then returned to the same body of public ground water by way of an infiltration system located near the proposed well.

The design of an “open-loop” heat exchange system is anticipated to have the full quantity of water withdrawn and returned to the same source aquifer within a short period of time. In addition, no chemicals can be added to the water and except for a change in temperature, the quality of the water cannot be changed. By doing this, the purpose is considered a nonconsumptive use.

Other Rights Appurtenant to the Place of Use

A review of Ecology records was conducted for existing water right certificates, permits, and claims within the project and the surrounding area. The search focused primarily on Section 27 within T. 7 N., R. 35 E.W.M. The review of Ecology records shows one water right appurtenant to the authorized place of use.

Walla Walla Adjudicated Certificate No. 198, together with Certificate of Change Vol. II-3, PP. 60, authorize 16.37 acre feet and up to 0.056 cfs from April 1 to November 1 for the seasonal irrigation of 4.23 acres. This water right is authorized to use the same well as that proposed under this application and is a primary water right.

Hydrogeology Analysis

The following hydrogeologic analysis was written by Guy Gregory Water Resources Program Technical Unit Supervisor in Ecology’s Eastern Regional office.

This application is a non-consumptive water right to supply a heat pump at the Nims residence, located in the NW¼SW¼ of Section 27, T. 7 N, R. 35 E.W.M.

Applications for ground water right permits and certificates are governed by RCW 90.44.060, which states in part “Applications for permits for appropriation of underground water shall be made in the same form and manner provided in RCW 90.03.250 through 90.03.340, as amended, the provisions of which sections are hereby extended to govern and to apply to ground water, or ground water right certificates and to all permits that shall be issued pursuant to such applications, and the rights to the withdrawal of ground water acquired thereby shall be governed by RCW 90.03.250 through 90.03.340, inclusive...” Among other things, RCW 90.03.290 requires Ecology to “investigate the application, and determine what water, if any, is available for appropriation, and find and determine to what beneficial use or uses it can be applied.”

The proposed well exists and a well log is available. The well, tag no. AAZ 354, is 8 inches in diameter and 155 feet deep. It penetrates surface soils and subsurface sediments typical of the suprabasalt sedimentary unit in the Walla Walla Basin. This unit is referred to in Ch. WAC 173-532 WAC (the Walla Walla Rule) as the gravel aquifer. The well was constructed in 1994, well prior to the rule. No static water level was reported; the log indicates some artesian pressure in the well at construction.

The proposal is to extract up to 6482 gallons per day of water, run through a heat exchanger, and discharge immediately into the ground through a drain field. At this location, the production and discharge locations are in the suprabasalt sediments, thus they are the same body of public groundwater.

The proposal is for a non-consumptive use of water from that body of public groundwater. The Walla Walla rule closed the gravel aquifer to consumptive appropriation [WAC 173-532-040(2)], but specifically excluded non consumptive appropriations [WAC 173-532-045(1)] from that closure.

Because this is a non-consumptive appropriation that produces water from the same body of groundwater to which that water is immediately returned, there is no diminishment of the existing source, and no impairment of existing rights will occur.

Impairment Considerations

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection. A water right application may not be approved if it would:

- Interrupt or interfere with the availability of water to an adequately constructed groundwater withdrawal facility of an existing right. An adequately constructed groundwater withdrawal facility is one that (a) is constructed in compliance with well construction requirements and (b) fully penetrates the saturated zone of an aquifer or withdraws water from a reasonable and feasible pumping lift.
- Interrupt or interfere with the availability of water at the authorized point of diversion of a surface water right. A surface water right conditioned with instream flows may be impaired if a proposed use or change would cause the flow of the stream to fall to or below the instream flow more frequently or for a longer duration than was previously the case.
- Interrupt or interfere with the flow of water allocated by rule, water rights, or court decree to instream flows.
- Degrade the water quality of the source to the point that the water is unsuitable for beneficial use by existing users (e.g., via sea water intrusion).

The applicant proposes to withdraw 6 gallons per minute for an open loop heat exchange system. The water will be returned to the same body of public ground water immediately after use and near the proposed source. This means that the request is non-consumptive since no diminishment of the source will occur. The formation is anticipated to have adequate capacity available for the proposed instantaneous withdrawal. Therefore, proposed appropriation is not anticipated to impair existing water rights.

Water Availability

For water to be available for appropriation, it must be both physically and legally available.

Physical availability

For water to be physically available for appropriation there must be ground or surface water present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use or uses. In addition, the following factors are considered:

- Volume of water represented by senior water rights, including federal or tribal reserved rights or claims;
- Water right claims registered under Chapter 90.14 RCW;
- Ground water uses established in accordance with Chapter 90.44 RCW, including those that are exempt from the requirement to obtain a permit; and
- Potential riparian water rights, including non-diversionary stock water.
- Lack of data indicating water usage can also be a consideration in determining water availability, if the department cannot ascertain the extent to which existing rights are consistently utilized and cannot affirmatively find that water is available for further appropriation.

Legal availability

To determine whether water to be legally available for appropriation, the following factors are considered:

- Regional water management plans – which may specifically close certain water bodies to further appropriation.
- Existing rights – which may already appropriate physically available water.
- Fisheries and other instream uses (e.g., recreation and navigation). Instream needs, including instream and base flows set by regulation. Water is not available for out of stream uses where further reducing the flow level of surface water would be detrimental to existing fishery resources.
- The Department may deny an application for a new appropriation in a drainage where adjudicated rights exceed the average low flow supply, even if the prior rights are not presently being exercised. Water would not become available for appropriation until existing rights are relinquished for non-use by state proceedings.

The applicant proposes to withdraw 6 gallons per minute for an open loop heat exchange systems. The water will be returned to the same body of public ground water immediately after use and near the proposed source. This means that the request is non-consumptive since no diminishment of the source will occur. The formation is anticipated to have adequate capacity available for the proposed instantaneous withdrawal. In addition, WAC 173-532 Walla Walla River Basin allows new appropriation from the gravel aquifer if they are non-consumptive. Therefore, water is both physically and legally available for the proposed appropriation.

Beneficial Use

The proposed use is a beneficial use of water as defined by statute (RCW 90.54.020(1)).

Public Interest Considerations

There has been no public expression of protest or concern regarding this specific proposal, and no findings through this investigation indicate that there would be any detrimental impact to the public welfare through issuance of the proposed use.

Conclusions

It is the conclusion of this examiner that, (1) public ground water is available for appropriation, (2) the water use is a beneficial use, and the appropriation (3) will not impair existing water rights, (4) nor will it be detrimental to the public welfare

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a water right be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

6 gallons per minute
0 acre-feet per year
Non-consumptive heat exchange

Point of Withdrawal

NW¼SW¼ of Section 27, Township 7 North, Range 35 E.W.M.

Place of Use

As described on Page 1 of this Report of Examination.

Dan Tolleson, Report Writer

Date

If you need this publication in an alternate format, please call Water Resources Program at (360) 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

